

Notice of Allowability

Application No.

10/662,004

Applicant(s)

COLBY ET AL.

Examiner

Art Unit

Gary L. Laxton

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the application filed 9/11/03.
2. ☒ The allowed claim(s) is/are 1-36.
3. ☒ The drawings filed on 11 September 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 8/30/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Gary L. Laxton
Primary Examiner
Art Unit: 2838

[Signature]
8/22/05

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-32 are allowed.
2. The following is an examiner's statement of reasons for allowance:

Claims 1-16; prior art fails to disclose or suggest, inter alia, a method of controlling a power inverter by calculating x-y phasor components of inverter output current and voltage referenced to a desired x-y coordinate frame; measuring real and reactive power output by the inverter based on the calculated x-y phasor components; and adjusting the inverter output current and voltage to reduce a difference between the measured real and reactive powers and desired real and reactive powers.

Claims 17-24; prior art fails to disclose or suggest, inter alia, a regulator circuit for controlling a power inverter having a measurement circuit to measure real and reactive power output by the inverter based on calculating x-y phasor components of inverter output current and voltage referenced to a desired x-y coordinate frame; and a feedback control circuit to control inverter voltage and current output based on a difference between the measured real and reactive powers and desired real and reactive powers.

Claims 25-28; prior art fails to disclose or suggest, inter alia, a computer readable medium storing a computer program comprising: program instructions to calculate x-y phasors for output voltage and output current from a power inverter configured to provide ac power; program instructions to measure real and reactive power output by the inverter based on the x-y

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phasors; program instructions to receive desired values for real and reactive power and to generate x-y control signals to control real and reactive power output by the inverter based on the measured real and reactive power and the desired values for real and reactive power.

Claims 29-36; prior art fails to disclose or suggest, inter alia, a power inverter having an inverter circuit to output ac power; a regulator circuit to control real and reactive power output by the inverter circuit, the regulator circuit comprising: a measurement circuit to measure real and reactive power output by the inverter circuit based on calculating x-y phasor components for voltage and current waveforms output by the inverter circuit; and a control circuit to control the real and reactive power output by the inverter circuit based on measured and desired real and reactive powers.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6,853,940 Tuladhar discloses an anti-islanding device and method for grid connected inverters; US 6,815,932 Wall discloses detection of island behavior and anti-islanding protection of a generator in grid connected mode; US 6,810,339 Wills discloses anti-islanding method and apparatus for distributed power

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generation; US 6,219,623 Wills discloses anti-islanding method and apparatus for distributed power generation

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary L. Laxton whose telephone number is (571) 272-2079. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571) 272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Gary L. Laxton
Primary Examiner
Art Unit 2838

8/22/05